

# THE PHARMA RESEARCH, A JOURNAL

The Pharma Research (T. Ph. Res.), (2010), 4-2; 202-205.  
Published on- 15 Mar 2011

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Sudarshan Institute of Technical Education Pvt. Ltd.

**Original Article**

**ISSN 0975-8216**

## COMING TREATMENT & AWARENESS "DENGUE"

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### ABSTRACT

World Health Organization (WHO) has warned that Dengue fever, for which there is no treatment or vaccine, is sweeping across Asia, with the number of hospitalizations and severe cases growing. Some 2.5 billion people are at risk globally of contracting dengue, one of the world's fastest-emerging infections, with more than 70 per cent of them living in the Asia-Pacific region. "At the moment there is no licensed vaccine available to prevent dengue disease and no specific treatment exists", Controlling mosquito numbers is the only effective method of prevention at this time. Now we can get protection from the four main strains of dengue from the one vaccination

**But experimental Dengue Vaccine Enters Final Trials, Could Be Commercially Available In 5 Years** : A dengue vaccine 10 years in the making could be on the market within five years, according to Australian researchers, the country's ABC News reports. A team at the Institute for Child Health Research "is about to conduct the final set of clinical trials before the vaccine can become commercially available and the vaccine "is now one step away from becoming licensed," the news service writes. The team "engineered [the vaccine] so that you can get protection from the four main strains of dengue from the one vaccination - so that will stop you getting dengue at all, we hope," Peter **Richmond**, an associate professor, from Perth's Telethon Institute for Child Health Research institute, Australia.

**Keywords:** dengue ,aedes aegypti mosquito.

### INTRODUCTION

#### Awareness: What is dengue fever?

Dengue fever is a disease caused by a family of viruses that are transmitted by mosquitoes. It is an acute illness of sudden onset that usually follows a benign course with symptoms such as headache, fever, exhaustion, severe muscle and joint pain, swollen glands (lymphadenopathy),

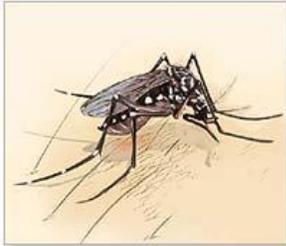
and rash. The presence (the "dengue triad") of fever, rash, and headache (and other pains) is particularly characteristic of dengue. Other signs of dengue fever include bleeding gums, severe pain behind the eyes, and red palms and soles.

Dengue (pronounced DENG-gay) strikes people with low levels of immunity. Because it is

caused by one of four serotypes of virus, it is possible to get dengue fever multiple times. However, an attack of dengue produces immunity for a lifetime to that particular serotype to which the patient was exposed.

Dengue fever is characterized by:

Fever  
Rash  
Muscle and  
joint pains



*Aedes aegypti* mosquito



Dengue hemorrhagic fever is a more severe form of the viral illness. Manifestations include headache, fever, rash, and evidence of hemorrhage in the body. Petechiae (small red or purple blisters under the skin), bleeding in the nose or gums, black stools, or easy bruising are all possible signs of hemorrhage. This form of dengue fever can be life-threatening and can progress to the most severe form of the illness, dengue shock syndrome.

#### **What areas are at high risk for contracting dengue fever?**

Dengue is prevalent throughout the tropics and subtropics. Outbreaks have occurred recently in the Caribbean, including Puerto Rico, the U.S. Virgin Islands, Cuba, and Central America. Cases have also been imported via tourists returning from areas with widespread dengue, including Tahiti, Singapore, the South Pacific, Southeast Asia, the West Indies, India, and the Middle East

#### **How is dengue fever contracted?**

The virus is contracted from the bite of a striped *Aedes aegypti* mosquito that has previously

bitten an infected person. The mosquito flourishes during rainy seasons but can breed in water-filled flower pots, plastic bags, and cans year-round. One mosquito bite can inflict the disease.

The virus is not contagious and cannot be spread directly from person to person. There must be a person-to-mosquito-to-another-person pathway.

#### **What are dengue fever symptoms and signs?**

After being bitten by a mosquito carrying the virus, the incubation period ranges from three to 15 (usually five to eight) days before the signs and symptoms of dengue appear. Dengue starts with chills, headache, pain upon moving the eyes, and low backache. Painful aching in the legs and joints occurs during the first hours of illness. The temperature rises quickly as high as 104 F (40 C), with relative low heart rate (bradycardia) and low blood pressure (hypotension). The eyes become reddened. A flushing or pale pink rash comes over the face and then disappears. The glands (lymph nodes) in the neck and groin are often swollen.

Fever and other signs of dengue last for two to four days, followed by a rapid drop in body temperature (defervescence) with profuse sweating. This precedes a period with normal temperature and a sense of well-being that lasts about a day. A second rapid rise in temperature follows. A characteristic rash appears along with the fever and spreads from the extremities to cover the entire body except the face. The palms and soles may be bright red and swollen.

#### **What is the treatment for dengue fever?**

Because dengue fever is caused by a virus, there is no specific medicine or antibiotic to treat it. For typical dengue, the treatment is purely concerned with relief of the symptoms

(symptomatic). Rest and fluid intake for adequate hydration is important. Aspirin and nonsteroidal anti-inflammatory drugs should only be taken under a doctor's supervision because of the possibility of worsening hemorrhagic complications. Acetaminophen (Tylenol) and codeine may be given for severe headache and for the joint and muscle pain (myalgia).

#### **What is the prognosis for typical dengue fever?**

Typical dengue is fatal in less than 1% of cases. The acute phase of the illness with fever and myalgias lasts about one to two weeks. Convalescence is accompanied by a feeling of weakness (asthenia), and full recovery often takes several weeks.

#### **What is dengue hemorrhagic fever?**

Dengue hemorrhagic fever (DHF) is a specific syndrome that tends to affect children under 10 years of age. It causes abdominal pain, hemorrhage (bleeding), and circulatory collapse (shock). DHF is also called Philippine, Thai, or Southeast Asian hemorrhagic fever and dengue shock syndrome. DHF starts abruptly with high continuous fever and headache. There are respiratory and intestinal symptoms with sore throat, cough, nausea, vomiting, and abdominal pain. Shock occurs two to six days after the start of symptoms with sudden collapse, cool, clammy extremities (the trunk is often warm), weak pulse, and blueness around the mouth (circumoral cyanosis).

In DHF, there is bleeding with easy bruising, blood spots in the skin (petechiae), spitting up blood (hematemesis), blood in the stool (melena), bleeding gums, and nosebleeds (epistaxis). Pneumonia is common, and inflammation of the heart (myocarditis) may be present.

The mortality (death) rate with DHF is significant. It ranges from 6%-30%. Most deaths occur in children. Infants under a year of age are especially at risk of dying from DHF.

#### **How can dengue fever be prevented?**

The transmission of the virus to mosquitoes must be interrupted to prevent the illness. To this end, patients are kept under mosquito netting until the second bout of fever is over and they are no longer contagious.

The prevention of dengue requires control or eradication of the mosquitoes carrying the virus that causes dengue. In nations plagued by dengue fever, people are urged to empty stagnant water from old tires, trash cans, and flower pots. Governmental initiatives to decrease mosquitoes also help to keep the disease in check but have been poorly effective. There is currently no vaccine available for dengue fever. There is a vaccine undergoing clinical trials, but it is too early to tell if it will be safe or effective. Early results of clinical trials show that a vaccine may be available by 2012.

#### *Dengue Fever at a Glance*

- Dengue fever is a disease caused by a family of viruses that are transmitted by mosquitoes.
- Symptoms such as headache, fever, exhaustion, severe joint and muscle pain, swollen glands (lymphadenopathy), and rash. The presence (the "dengue triad") of fever, rash, and headache (and other pains) is particularly characteristic of dengue fever.
- Dengue is prevalent throughout the tropics and subtropics. Outbreaks have occurred recently in the Caribbean, including Puerto Rico, the U.S. Virgin Islands, Cuba, and Central America.
- Because dengue fever is caused by a virus, there is no specific medicine or antibiotic to

treat it. For typical dengue fever, the treatment is purely concerned with relief of the symptoms (symptomatic).

- The acute phase of the illness with fever and myalgias lasts about one to two weeks.
- Dengue hemorrhagic fever (DHF) is a specific syndrome that tends to affect children under 10 years of age. It causes abdominal pain, hemorrhage (bleeding), and circulatory collapse (shock).
- The prevention of dengue fever requires control or eradication of the mosquitoes carrying the virus that causes dengue.
- There is currently no vaccine available for dengue fever.

### Summary

Found in tropical areas of the world, dengue fever is a viral disease that is spread through the bite of an infected mosquito. There are four different virus strains associated with dengue fever and outbreaks are common. Dengue fever has duration of only a few days and shows symptoms of high fever, severe headaches, muscle pain and spasms, nausea and a rash. Presently there is no vaccine to protect travelers from this unfortunate affliction, but if you experience any symptoms after traveling to an area where dengue fever is present, you should seek immediate medical attention. Dengue fever is not fatal and is usually simply treated. But Experimental Dengue Vaccine Enters Final Trials could be commercially available in year 2012.

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